

R. HOUGH.
Ventilators.

No. 157,447.

Patented Dec. 8, 1874.

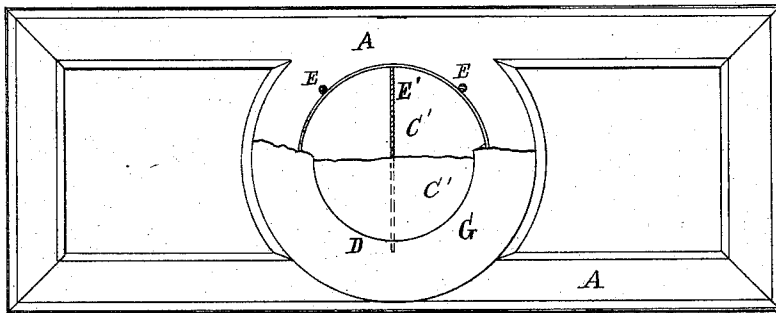


Fig. 1.

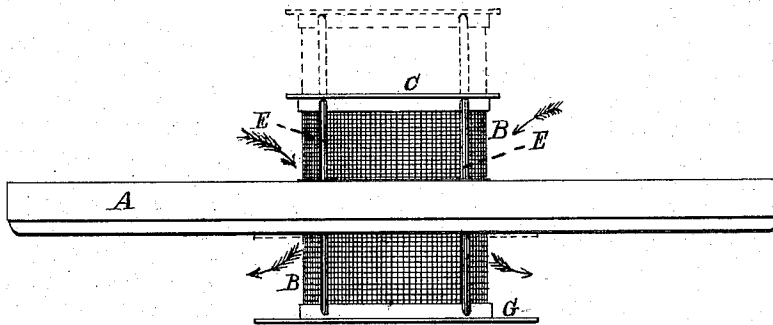


Fig. 2.

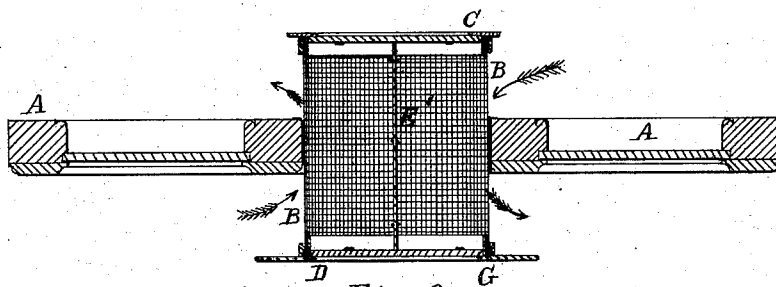


Fig. 3.

Witnesses.

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REUEL HOUGH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VENTILATORS.

Specification forming part of Letters Patent No. 157,447, dated December 8, 1874; application filed June 25, 1874.

To all whom it may concern:

Be it known that I, REUEL HOUGH, of Boston, county of Suffolk and State of Massachusetts, have invented certain Improvements in Ventilators, of which the following is a specification:

My improved ventilator consists substantially of an opening through the walls of the room or space to be ventilated, of any convenient form, through which a hollow movable casing or conductor, which nearly fills the same, slides transversely; the sides of the said casing or conductor, parallel to its line of movement, being formed wholly or in part by wire-gauze or other finely-perforated material; and the other sides of the same, which are parallel to the plane of the wall, are closed.

By this construction, when the movable casing or conductor is placed midway in its opening through the wall, the perforated sides of the said casing permit the external air to flow through the gauze into the interior of the casing, and from thence outward into the space upon the other side of the wall. The sides of the casing which are parallel to the wall being closed, prevent the entrance of the rain while it freely admits the air. When the casing is pushed to one side, so that the closed side comes against the wall, the passage through the ventilator is closed. This construction of the main part of the device may also be further combined with several subordinate devices for directing the flow of the currents, and for applying the same to particular uses, which will be set forth in the description. This ventilator is intended to be used in the walls of rooms, in windows, railroad-cars, and also in a vertical position in skylights.

In the drawings, Figure 1 is an elevation with a portion of the front plate broken away to show the parts behind it. Fig. 2 is a plan with the ventilator open, with its position when closed shown by the dotted lines. Fig. 3 is a horizontal section.

In the drawings the ventilator is represented as being adapted to the sash of a window, and is of a circular form, which is probably the most convenient form of construction, although other forms may be adopted.

A is the frame having a circular opening

through it, and B is the perforated casing sliding transversely through this opening, and nearly filling it, with its outside formed of wire-gauze, or other similar material that will admit the air, and exclude solid bodies of much size. C D are the flat sides or ends of the casing, which are made with an outside ring or frame of metal attached to the gauze, and they also may be connected by the small metal rods E, to strengthen the same, and serve as guides upon which the casing B slides. Each of the sides C D may be made closed, as desired; but when made with rims, as shown, each is fitted with a plate of glass, C', to close the end, and at the same time admit the light. The plate D is made with a broad flange or rim, G, that projects a considerable distance out beyond the gauze upon the discharging side of the casing, and serves as a deflector of the air laterally in all directions, so as to prevent the formation of objectionable currents in the room, and it also, when pushed outward, closes upon the frame and shuts up the opening of the ventilator, and forms an interior finish. Through the middle of the casing, in the direction of its axis, is placed a vertical partition, E', as shown in Fig. 3, which extends the entire length, and is proposed to be used in ventilators for railroad-cars, or when it is desired to use a lateral current of the wind to drive a current through the ventilator on one side of the partition, and to exhaust a corresponding current upon the opposite side of the partition, as is shown by the arrows in Fig. 3, in an obvious manner; but in the use of this device for ventilating rooms this partition would not ordinarily be used.

Although I have shown the ventilator as circular in form, it may be obviously made square, or of other forms, and still operate in the same way; but as this is a simple form I have shown it as an embodiment of my invention, and other modes of constructing the parts, and other kinds of material, may obviously be used.

What I claim is—

1. The perforated movable casing B, fitted to an opening in a frame, A, having its sides, parallel to its line of movement, formed of perforated material, and its transverse sides

closed, and operating substantially as described.

2. The rim or deflector G, in combination with the casing B and the frame A, substantially as described.

3. The combination, with the rims C and D, or either of them, of the glass panes C', substantially as described.

4. The partition E', in combination with the perforated casing B, substantially as described.
Executed June 22, 1874.

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Witnesses:

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